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~~TOP SECRET~~

17

MAR 1980

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TCS-7048-60  
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17 SEP 1970

MEMORANDUM FOR: Record

SUBJECT : Operational Report of Mission 8010,  
System IV.

1. There are a few general comments to be made concerning the entire mission pertaining to the System IV carried on this flight. As was previously mentioned in the Operational Report of Mission 1543, the tape for this mission was received on only the hub with no sides included. We wish to suggest that this situation be rectified.

2. All receivers were set with a 15 second lock period, with the exception of Receiver 2, which was set for 10 seconds. We wish to request that these be changed to the following: Receiver 1A - 1 minute. Receiver 1B through 6 - 30 seconds. Receiver 7 - 45 seconds. The longer lock-on time will aid in the readout and the 30 second period was the generally agreeable time period for everyone concerned on previous System IV missions. These figures are in general agreement with a recent paper on System IV requirements with the exception of the 1 minute lock on Receiver 1A. We feel that this change is necessary to catch the scan of SPOON REST which may be as long as 45 seconds.

3. It appears that the recorder slowed down near the end on this mission. This malfunction should be corrected.

4. The scope camera clicks are still apparent in Receivers 1A through 5. It also appears that the scope camera is taking a good many pictures at the beginning of the mission, and none later on. This is based on the presence of the clicks, as we have seen no film for either this mission or 1543. If scope pictures are made, it is requested they be transmitted with the tapes.

5. The following is a brief resume by receivers:

Receiver 1A - This receiver is still noisy near the top of its frequency range. Signals were received but noise makes recovery of any weak signals very difficult.

Receiver 1B - This receiver was also noisy, both the random type and the 830 cps tone mentioned in a previous report. No signals were found.

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Receiver 2 - There seems to be a jinx connected with this receiver. It resorted to another of its old tricks. Shortly after take-off this receiver apparently failed in the following way. It would lock on a Nixie reading of 065, then creep down to 036 during the 10 second lock. Then it would go back to 065 and repeat. Since this occurred on the right side the scan should have jumped to the left, instead of back up to 065. During all of these noise locks the characteristic 416 or 833 cps tone was heard in addition to the overall loud noise level of a random nature. This malfunction continued throughout the entire mission. Operation of this receiver is considered far from satisfactory.

Receiver 3 - The noise level of this receiver was acceptable. Signals were received with good strength and operation is considered satisfactory. There are still present random hits of the 416 cps internal signal but they were not particularly bothersome.

Receiver 4 - Random hits of the 416 cps tone were found in this receiver also. These were a little more prevalent in this receiver than in Receiver 3. Signals were noted and the noise level was satisfactory. Operation of this receiver can be considered generally satisfactory.

Receiver 5 - The noise level of this receiver was satisfactory. Signals were noted as well as a few bursts of the 416 cps internal signal, particularly when the receiver was at the bottom of its frequency range. Operation was satisfactory.

Receiver 6 - Noise level was satisfactory. No signals were observed.

Receiver 7 - Only one signal was intercepted by this receiver, at least as revealed by our spot check. Noise level was a bit higher than Receiver 6, but still within easy readout limits. Operation can be considered satisfactory.

Receivers 8, 9, and 10 - The 690 cps tone mentioned in Mission 1543 is still present throughout the entire mission. The rate has changed somewhat, the signal occurring every 1 second and lasting for 0.5 seconds. Since the strength does not vary, it appears to be from some source on the aircraft or some internal source of the system.

Receivers FM1, FM2 - Both of these receivers appeared to work normally although signals were not very strong or of long duration in FM2. FM1 turned in a fine performance in reproducing the audio portion of a TV Broadcast signal.

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6. Except where noted above, the Radio Frequency readout by nixies appears to have operated satisfactorily. The nixies appeared to be slightly more stable than on Mission 1543.

7. Considering the methods used of spot checking for this operational readout, it appears at this time that there were not quite as many signals received on this mission as found on the previous System IV on Mission 1543. No reason can be given by us for this as the missions essentially followed the same route and the preflight sensitivities from the field were shown as being nearly the same. This situation might bear investigation.



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Chief, ELINT Branch, ED/SI

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